Remarks

In the final office action mailed June 20, 2005, claims 1 - 7, 10, 12, 14 and 15 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,991,551 (to Bacs, Jr. et al.); claim 9 was rejected under §102(b) over U.S. Patent No. 6,021,005 (to Cathey, Jr. et al.); claims 16 - 19 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,575,193 (to Greivenkamp, Jr.); claim 8 is rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,107,617 (to Love et al.);claim 11 is rejected under 35 U.S.C. §103(a) over Bacs Jr., et al.; claim 13 is rejected under 35 U.S.C. §102(b) over Bacs Jr. et al. in view of U.S. Patent No. 5,453,844 (to George et al.); and claim 20 is rejected under 35 U.S.C. §102(b) over Greivenkamp, Jr. in view of Love et al.

The office action mailed June 20, 2005 states, in part, that the Bacs, Jr. et al. reference discloses that by selectively switching liquid crystal shutters on and off, the blurring of an image may be enhanced. The Bacs, Jr. et al. reference discloses an imaging system that uses a parallax scanning lens aperture. In an embodiment, the lens aperture is disclosed to be provided by a matrix array of liquid crystal cells as shown in Figure 8 thereof. Such a system, however, only provides that illumination is blocked from passing through most of the cells (e.g., 92b), yet may pass through other cells (e.g., 92a and 92c). Such an array does not provide that a portion of the light is blurred as it passes through the spatial light modulator. The blurring that is mentioned in line 36 of column 10 of the Bacs, Jr. et al. reference relates to reducing differences between frames that cause the apparent motion (provided by successive frames) to appear discontinuous. In

particular, the relevant section of the text states as follows:

> When the image frames are displayed, any foreground and background motion will appear continuous. Thus annoying strobing effect (jitter) of any foreground and background motion is avoided. Instead, enhanced blurring (relative to the continuous parallax scanning motion approach) of foreground and background motion will be achieved to more effectively mask these motion artifacts.

Bacs, Jr. et al., col. 10, lines 33 - 39.

The present invention is directed toward a system that selectively blurs an input optical image. The Bacs, Jr. et al. reference does *not* disclose selective blurring of portions of an input image. The Bacs, Jr. et al. reference discloses selective *passage* of portions of input image, and the blurring of motion artifacts when *separate* images are presented for showing motion.

Claim 1 is direct to an imaging system that includes, in part, a spatial light modulator that is interposed between the image receiving unit and an input image. The spatial light modulator is for selectively modulating the input image such that at least one portion of the input image may be blurred as it passes through the spatial light modulator toward the image receiving unit. Nothing in the Bacs, Jr. et al. reference discloses, teaches or suggests such a system. With regard to the first and second areas discussed in the office action (page 2, fourth paragraph), claim 1 states that at least a portion of the input is blurred as it passes to the image receiving unit. The Bacs, Jr. et al. reference includes no area of the input image that is blurred as it passes to the image receiving unit. Claim 1, therefore, is submitted to be in condition for allowance. Each of claims 2 - 11 depends directly

or indirectly from claim 1 and is also submitted to be in condition for allowance.

Independent claim 12 is directed to a system that includes, in part, an array of birefringent elements through which an image field may pass, wherein the birefringent elements are each individually selectable to permit selective birefringence of an input image such that at least a portion the image field is blurred prior to reaching an image receiving unit. The optical element 90 shown in Figure 8 of Bacs, Jr. et al. does not provide that a portion the image field is blurred prior to reaching an image receiving unit. Again, the optical element 90 instead provides selective transparent or opaque cells wherein the transparent cells provide a lens aperture. Claim 12, therefore, is submitted to be in condition for allowance. Claim 13 depends directly from claim 12 and is also submitted to be in condition for allowance.

Independent claim 14 is directed to a system that includes, in part, a plurality of electrodes positioned adjacent a liquid crystal cell such that portions of the liquid crystal cell may be selected to provide birefringence of an image field such that at least a portion of the image field is blurred prior to reaching an image receiving unit. Again, the optical element 90 shown in Figure 8 of Bacs, Jr. et al. does not provide such selective birefringence such that at least a portion of the image field received by the receiving unit is blurred. The optical element 90 instead provides selective transparent or opaque cells wherein the transparent cells provide a lens aperture. Claim 14, therefore, is submitted to be in condition for allowance. Claim 15 depends directly from claim 14 and is also submitted to be in condition for allowance.

The Greivenkamp, Jr. reference discloses an optical color dependent spatial frequency filter that includes a pair of birefringent elements that are able to change the polarization state of light between them such that the polarization of a first color is changed by a first amount, and a polarization state of a second color is changed by a second amount. The filter is disclosed to be used as a color image sensor. The Greivenkamp, Jr. reference discloses that the color dependent spatial frequency filter limits the spatial frequenies in certain color components of the input image, and limits the spatial frequencies in other color components to lower frequencies. The color dependent spatial filter is disclosed to reduce aliasing in each color in an image "without unnecessairily scarificing resolution or sharpness in any of the colors of the image." (Greivenkamp, Jr., col. 4, lines 1 - 5). The Greivenkamp, Jr. reference discloses in Figure 2, thereof, a first birefringent element 16 and a second birefringent element 20.

Independent claim 16 is directed to an imaging system that includes, in part, a spatial light modulator that includes a first area for refracting the input image along a principle axis of refraction, and a second area for refracting the input image along a principle axis of refraction and along a second axis of refraction that is angularly disposed to the principle axis of refraction such that a first portion of the input image that passes through the first area of said spatial light modulator is not blurred, while a second portion of the input image that passes through the second area of said spatial light modulator is blurred.

The Greivenkamp, Jr. reference does not disclose a spatial light modulator that first and second areas, only one of which provides birefringent refraction, and

that a first portion of an input image is not blurred while a second portion of an input image is blurred. The subject matter of claim 16, therefore, is not disclosed in the Greivenkamp, Jr. reference. Claim 16, therefore, is submitted to be in condition for allowance. Claim 17 depends from claim 16 and is also submitted to be in condition for allowance.

Independent claim 18 is also directed to a system that includes, in part, a spatial light modulator that includes a first area for refracting the input image along a first axis of refraction and a second axis of refraction, and a second area for refracting the input image along the first axis of refraction and along a third axis of refraction such that a first portion of the input image that passes through the first area of the spatial light modulator is slightly blurred, while a second portion of the input image that passes through the second area of the spatial light modulator more blurred than the first portion of the input image. The Greivenkamp, Jr. reference does not disclose such a spatial light modulator. The subject matter of claim 18, therefore, is not disclosed in the Greivenkamp, Jr. reference. Claim 18, therefore, is submitted to be in condition for allowance. Claims 19 and 20 depend from claim 18 and are also submitted to be in condition for allowance.

Each of claims 1 - 20 therefore, is respectfully submitted to be in condition for allowance. Favorable action consistent with the above is respectfully requested

Respectfully submitted,

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